

IN THE CLAIMS

Please amend claims 1-10, 22, 24, and 25 as follows. In accordance with 37 C.F.R. § 1.21(c)(1), a marked-up version of the claims is set forth at the end of this response under the heading "Marked-up Version of the Claims."

1. (Once amended) A method for treating cancer, comprising administering to a patient that has cancer a protein that comprises a receptor-antagonizing domain and a positive immunomodulator domain.
2. (Once amended) The method according to claim 1, wherein the receptor-antagonizing domain is a prolactin-antagonist domain.
3. (Once amended) The method according to claim 1, wherein the positive immunomodulator domain is an interleukin.
4. (Once amended) The method according to claim 3, wherein the interleukin is an IL-2.
5. (Once amended) The method according to claim 3, wherein the positive immunomodulator domain is an IL-12.
6. (Once amended) The method according to claim 3, wherein the positive immunomodulator domain IFN γ .
7. (Once amended) The method according to claim 1, wherein the protein is a prolactin antagonist-interleukin 2 fusion protein.
8. (Once amended) The method according to claim 2, wherein the prolactin-antagonist domain has an arginine at position 129 of the prolactin protein.
9. (Once amended) The method according to claim 2, wherein the prolactin-antagonist domain comprises a protein comprising the amino acid sequence of SEQ ID NO. 1.

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10. (Once amended) The method according to claim 2, wherein the prolactin-antagonist domain comprises a truncated prolactin sequence.

A2
22. (Once amended) The method according to claim 1, wherein cells of the overexpress a prolactin receptor at levels greater than in normal, healthy cells.

24. (Once amended) The method according to claim 1, wherein the receptor-antagonizing domain is an apoptosis-promoting domain.

A3
25. (Once amended) The method according to claim 24, wherein the apoptosis-promoting domain inhibits STAT3 phosphorylation in a cell to which the apoptosis-promoting domain binds.

[Please add the following new claims:]

28. (New) A method for inducing an immune response in an individual that has cancerous cells, comprising administering to said individual a protein comprising (i) a prolactin-antagonist domain and (ii) an immunomodulatory domain.

A4
29. (New) The method of claim 28, wherein said prolactin-antagonist domain comprises a protein consisting essentially of the amino acid sequence of SEQ ID NO. 1.

30. (New) The method of claim 29, wherein said SEQ ID NO. 1 comprises one or more conservative amino acid substitutions.

31. (New) The method of claim 28, wherein said prolactin-antagonist domain comprises a protein consisting essentially of a part of the amino acid sequence of SEQ ID NO. 1.

32. (New) The method of claim 31, wherein said part of SEQ ID NO. 1 comprises one or more conservative amino acid substitutions.

33. (New) The method of claim 28, wherein said prolactin-antagonist domain comprises a protein consisting essentially of the amino acid sequence of SEQ ID NO. 1, wherein the amino acid at position 129 of SEQ ID NO. 1 is not glycine.

34. (New) The method of claim 28, wherein the amino acid at position 129 of SEQ ID NO. 1 is arginine.

35. (New) The method of claim 28, wherein said cancerous cells express prolactin receptors at a level greater than that of normal, healthy cells.

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Wf 36. (New) The method of claim 28, wherein said immunomodulatory domain is selected from the group consisting of IL-2, IL-12, and IFN γ .

37. (New) The method of claim 28, wherein said immunomodulatory domain is IL-2.

38. (New) The method of claim 28, wherein said immunomodulatory domain is IL-12.

39. (New) The method of claim 28, wherein said immunomodulatory domain is IFN γ .

40. (New) A method for inducing an immune response in an individual that has cancerous cells, comprising administering to said individual a protein comprising (i) a domain that binds to a receptor expressed on a cancer cell altering the function of said receptor, and (ii) another domain that elicits an immune response that is targeted to said cancer cell.